



City Council of Gibraltar.



ANNUAL REPORT

ON THE

HEALTH OF GIBRALTAR

FOR THE YEAR

1946

BY

Major J. Q. MOUNTAIN, B.Sc., M.B., Ch.B.,
D.P.H., M.D.

Royal Army Medical Corps.

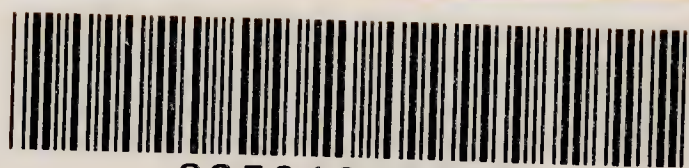
Medical Officer of Health,

with which is included the

Report of the City Analyst and Bacteriologist.

Printing by the Garrison Library Printing Works.

RCB / 189P



22501398877



City Council of Gibraltar.

ANNUAL REPORT
ON THE
HEALTH OF GIBRALTAR
FOR THE YEAR

1946

BY

Major J. Q. MOUNTAIN, B.Sc., M.B., Ch.B.,
D.P.H., M.D.

Royal Army Medical Corps.

Medical Officer of Health,

with which is included the

Report of the City Analyst and Bacteriologist.

WELDON INSTITUTE	
Q. 11	
Q. 12	Ann Rip
Q. 13	WA28
	. EG5
	G 44
	1946

LIST OF CONTENTS

	PAGE
METEOROLOGICAL REPORT	1
VITAL STATISTICS	5
Number of deaths	6
Causes of death	7
BIRTHS AND INFANTILE MORTALITY	8
INFANT & CHILD WELFARE	9
SCHOOL MEDICAL SERVICE	10
PREVALENCE AND CONTROL OF INFECTIOUS DISEASES	12
INVESTIGATION AND PREVENTION OF OTHER DISEASES	17
Flies and Rats Repression Measures	19
Medical Work Done for the Council	27
Disinfection	27
Ambulance Service	28

LIST OF CONTENTS—Continued.

SANITARY CIRCUMSTANCES OF THE DISTRICT

Water	... ..	29
Sewage	... ..	29
Refuse Collection and Dispersal	... ..	30
Public Highways	... ..	30
HOUSING	... ..	31
SUMMARY OF WORK DONE BY SANITARY INSPECTORS	... ..	32
FOOD	... ..	34
REPORT OF CITY ANALYST & BACTERIOLOGIST		35
BACTERIOLOGICAL, PATHOLOGICAL & PUBLIC HEALTH WORK DONE	... ..	36

CITY COUNCIL OF GIBRALTAR

Chairman.

Councillor J. A. HASSAN.

Vice-Chairman.

Councillor A. J. BALDORINO.

Councillor E. J. ALVAREZ.

Councillor O. L. CHAMBERLAND.

Councillor Colonel R. H. C. COLVILL, R.E.

Councillor J. T. ELLICOTT.

Councillor Dr. J. J. GIRALDI, M.D., M.R.C.P.

Councillor Dr. H. W. HOWES (*Director of Education*).

Councillor L. MANNIA.

Councillor R. J. PELIZA.

Councillor Wing-Commndr. J. A. K. PETTIT, R.A.F.

Councillor Capt. G. T. PHILIP, C.B.E., D.S.O., D.S.C., R.N.

Councillor Dr. D. J. VALENTINE, C.B.E., M.C. (*Chief Medical Officer*).

Medical Officer of Health.

Major G. M. FLEMING, M.A., M.B., B.Ch., M.R.C.S., L.R.C.P.
D.P.H., Royal Army Medical Corps.

Chief Sanitary Inspector and Public Health Chief Clerk.

**C. E. NORTON, M.R. San.I., A.R.P.S.

Sanitary Inspectors.

**P. VELLA, A.R. San..I

**J. SUAREZ, M.R.San.I., M.S.I.A.

**A. TRAVERSO, A.R.San.I.

J. J. TIPPING.

J. ALCANTARA.

City Analyst and Bacteriologist.

Major D. A. STANLEY, M.B., B.S., B.Sc. (Lond), M.R.C.S.
L.R.C.P., A.R.I.C., R.A.M.C.

Laboratory Assistants.

H. J. BRUZON, A.I.M.L.T.

M. J. GOMEZ.

R. M. CAVILLA.

Veterinary Adviser.

*Sergeant P. BARNETT, R.A.V.C.

*Occasional.

**Certificate Inspector of Meat and other Foods.



Digitized by the Internet Archive
in 2019 with funding from
Wellcome Library

<https://archive.org/details/b31407626>

COLONIAL DEPARTMENT

Colonial Hospital, Chief Medical Officer.

D. J. VALENTINE, C.B.E., M.C., L.R.C.P., M.B.,
B.S., D.P.H., D.T.M. & H,

Medical Officers.

N. H. SKELTON-BROWNE, M.R.C.S. (Eng.), L.R.C.P. (Lond),
C. MICHIE, M.B., Ch.B. [D.A.
J. A. COCHRANE, Esq., M.R.C.S. (Eng), L.R.C.P. (Lond), D.A.,
*J. A. DURANTE, Esq., M.R.C.S. (Eng), L.R.C.P. (Lond),

Maternity and Child Welfare Services.

Medical Officer in Charge C. MICHIE, M.B., Ch.B.
Health Visitors Miss M. F. DAW.
Miss L. M. DELANEY.

Public Vaccinator

J. A. DURANTE, Esq., M.R.C.S. (Eng), L.R.C.P. (Lond),

Port Medical Officer.

*A. A. RUSSO, Esq., L.R.C.S. (Ire), L.R.C.P., L.M. (Rotunda),

Assistant Port Medical Officer.

*J. DOTTO, Esq., M.R.C.S., L.R.C.P.,

Inspector of Food.

Medical Officer of Health.

School Medical Services.

H. G. TRIAY, Esq., M.D., Ch.B., D.C.H.R.C.P. & S. (Eng).

District Medical Officers.

*F. CARRERAS, Esq., (Spanish Qualifications).
*J. J. VASQUEZ, Esq., L.R.C.P. (Ire.) L.R.C.S. (Ire.) L.M.,
R.C.P. and S. (Ire.) L.M. (Rotunda).

Visiting Dentists.

*A. A. DANINO, Esq., L.D.S., R.C.S. (Eng).
*J. J. COCHRANE, Esq., L.D.S., R.C.S. (Eng).

*Allowance paid to private medical practitioners as a retaining fee
for their services.

BOARD OF HEALTH

The Chief Assistant Secretary (Chairman).

The Deputy Director of Medical Services.

The Senior Medical Officer, Colonial Government.

The Medical Officer of Health, Gibraltar.

The Royal Naval Representative.

The Royal Air Force Representative.

The Port Surgeon.

Secretary—E. H. DAVIS, Esq.

PREFACE

It is with some diffidence that I presume to report on the Health of Gibraltar in 1946 as I had no personal knowledge of that period. However, my predecessor Major, G. M. Fleming, who then held the appointment of Medical Officer of Health, provided me with the figures and not a few notes from which I have been able to compile this report.

The health records for the year are remarkably good, considering the overcrowded conditions under which a large part of the population live.

Undoubtedly the most urgent problem in Gibraltar, as in the rest of Europe, is one of housing. Not only are there insufficient houses for the people, no building have occurred during the war years, but much of the pre-war property has deteriorated from lack of repair. Difficulties of supply both of materials and labour are great, but every effort must be made to build more dwellings for the people. In most cases, these will have to be in the form of blocks of flats, as there is insufficient suitable building space available to house the population in individual houses. Our lucky escape from serious epidemics cannot be expected to continue for ever under the present overcrowded conditions.

At the end of 1945 the Colonial Government took over the Child Welfare and School Medical Services thus ensuring a unified control of the curative and preventive aspects of this work. This change also permits continuous supervision throughout the Ante natal, Natal, Infant and School periods of life, as the majority of births are now taking place in the hospitals.

The perennial problem of water supply continues to raise its head and is likely to become more pressing, for as the population becomes more hygienically minded, so will the consumption per head of both fresh and brackish water increase. However, certain scientific discoveries made during the late war whereby the salt content of water can be considerably reduced, may

assist in overcoming this problem and the City Engineer is examining the possibilities of utilizing these methods to increase the supplies of potable water.

The year 1946 saw the completion of the intensive Rat Campaign, the story of which is narrated at some length later in this report. The control of rodents is an important safety measure for not only do they do enormous damage by their ravages, but where rats are found there is always a danger of the spread of such diseases as Plague, Epidemic Jaundice etc. In a port this danger is obviously much greater. The results of the tremendous efforts exercised in the Rat Extermination Campaign were exceedingly good; so good that Mr. W. McAuley Gracie, the Director of Infestation Control, Ministry of Food, when he revisited Gibraltar in September thought our effort merited an article in the Ministry of Food Journal "The Rodent Mail."

As will be seen from the report of the City Analyst and Bacteriologist the work of this department has again increased, and if trends in other cities are indicative, it will continue to grow.

It remains for me to express on behalf of my predecessor, thanks to the Staff of the Health Department for their loyal co-operation throughout a year made difficult by the aftermath of war.

J. Q. MOUNTAIN,
Major, R.A.M.C.
Medical Officer of Health.

Public Health Department,
City Council of Gibraltar.

METEOROLOGICAL REPORT.

(Kindly supplied by the Senior Meteorological Officer,
R.A.F., North Front)

Weather Summary for the year 1946.

The year opened with a very wet, windy spell, a gale lasting several days being accompanied at times by torrential rain. Later in January and throughout February, the weather was fine for the time of the year with rainfall well below and sunshine and temperatures above normal.

March, April and May were all wetter than usual, April and May producing double the normal rainfall. Sunshine was well above normal in March and well below in April and May. Temperatures were very much below average in May.

The settled summer season set in towards the end of May, rather later than usual, and persisted until mid-October. During this period, weather was finer than usual with negligible rainfall (less than half an inch all told) and sunshine consistently above normal.

The wet winter season set in in mid-October, but weather was still mainly fine until the end of the month with sunshine and temperatures well above normal. A very heavy fall of rain which gave nearly three inches of rain in 24 hours towards the end of the month brought the rainfall up to normal.

November was unsettled and brought much less sunshine than normal. Rainfall was below normal, in spite of a very heavy fall in the middle of the month when $3\frac{1}{2}$ inches fell in 16 hours, nearly 3 inches falling in about 2 hours.

December was very fine for the time of the year with little rainfall (less than one third of normal) and sunshine averaging 2 hours a day more than normal. Average temperatures were below normal, a cold spell in the middle of the month giving unusually low temperatures. The absolute minimum temperature of 36°F recorded at Windmill Hill on 18th was the lowest recorded in December since observations were started in 1935.

The total rainfall for the year was 33.21 inches against the normal of 35.15 inches. The first six months were wetter than usual giving 22.42 inches against the normal of 18.63 inches. The second half of the year produced only 10.82 inches against the normal of 16.52 inches.

Height: 403 Feet Above M. S. L.

Months	RAINFALL			SUNSHINE		W E A T H E R								
	Total mm.	Max in 24 h	Date	Daily Mean (hrs)	o/o of Poss.	No. of Days of								
						Rain	Snow	Hail	Thun- der	Clear Sky	Over- cast Sky	Gales	Fog	Frost
Jan	199.6	65.8	3	6.08	60.2	16	0	1	1	0	4	4	0	0
Feb	34.3	22.2	27	8.20	75.9	7	0	1	2	0	0	2	0	0
Mar	121.4	37.4	4	7.79	65.2	15	0	1	4	0	0	4	0	0
April	11.0	18.6	29	6.14	46.7	21	0	1	1	0	1	0	0	0
May	101.7	22.5	2	8.23	58.2	19	0	1	2	0	0	0	0	0
June	1.7	1.6	20	11.09	76.1	5	0	0	4	1	0	0	1	0
July	1.2	1.2	31	11.14	77.6	1	0	0	1	3	0	0	0	0
Aug	0.6	0.6	23	11.70	87.0	1	0	0	0	6	0	0	0	
Sept	6.1	5.1	28	8.84	70.9	3	0	0	1	5	0	0	1	9
Oct	83.8	73.5	29	8.30	73.4	7	0	0	2	1	0	0	0	0
Nov	139.6	81.8	11	4.90	47.7	16	0	0	1	0	0	2	0	0
Dec	42.6	28.5	17	7.24	74.3	5	0	0	0	2	0	7	0	0
Year	843.6	81.8	Nov. 11	8.30	67.8	116	0	5	19	18	5	19	2	0

WIND

Total No. of observations at 03, 19, 15, & 21hr. of-

MONTHS	FORCE				DIRECTIONS							
	8 or over	4-7	1-3	Calm	N	NE	E	SE	S	SW	W	NW
Jan.	8	66	45	5	18	2	31	10	7	1	13	37
Feb.	2	60	40	10	6	1	45	12	2	0	7	29
Mar.	4	74	44	2	2	2	30	2	1	5	41	39
April.	0	68	49	3	4	4	31	13	4	2	39	20
May.	0	80	40	4	0	1	10	5	4	3	72	25
June.	0	66	46	8	0	15	64	4	1	3	14	11
July.	0	85	34	5	0	8	74	1	1	7	20	8
Aug.	0	67	48	9	1	1	42	4	2	8	45	12
Sept.	0	70	40	10	0	6	54	1	1	0	24	24
Oct.	0	56	66	2	6	4	32	3	1	3	30	43
Nov.	1	79	40	0	2	6	42	3	0	1	30	36
Dec.	3	98	23	0	5	5	13	0	1	1	40	59
Year.	18	869	515	58	44	55	468	58	25	34	375	343

VITAL STATISTICS.

The civil population of Gibraltar as shewn in the Records and Permit Office of the Police Department consisted, at the end of 1946 of the following:—

	<i>Men</i>	<i>Women</i>	<i>Children</i>	<i>Totals</i>
British Subjects	7,083	7,649	4,537	19,269
Resident aliens	991	930	43	1,964
Grand totals	8,074	8,579	4,580	21,233

DEATHS.

The number of deaths registered among the resident British population was one hundred and seventy seven; and in addition ten deaths were registered among resident aliens, making a total of one hundred and eighty-seven.

These figures provide a death rate of 9.18 per thousand for the fixed population and 8.8 per thousand for the total population.

The principal causes of death were:—

Cancer	31
Heart Diseases	29
Haemorrhage, apoplexy & softening of brain	14
Tuberculosis of the Nervous System ...	7)
Tuberculosis of the Res. System ...	6)
Pneumonia	12
Other diseases	88
	<hr/> 187 <hr/>

Forty eight per cent. of the deaths were of people over 65 years of age.

(6)

The number of deaths in each month and quarter of 1946 was as follows :—

	Population		Resident Aliens		Non Resident Aliens	
	M.	F.	M.	F.	M.	F.
January	7	10	1	—	2	—
February	7	5	—	—	2	—
March	14	3	2	—	1	—
Total 1st quarter:-	28	18	3	—	5	—
April	6	5	—	1	—	1
May	7	9	1	—	—	—
June	7	6	—	—	—	—
Total 2nd quarter:-	20	20	1	1	—	—
July	8	10	1	—	—	—
August	5	5	3	—	—	—
September	4	7	—	—	—	—
Total 3rd quarter:-	17	22	4	—	—	—
October	12	6	—	—	1	—
November	11	8	1	—	1	—
December	6	9	—	—	1	—
Total 4th quarter:-	29	23	1	—	3	—

Causes of Death in the Civil Population during 1946, According to the International Abbreviated List with Age and Sex Incidence

Cause of Death	All Ages											Totals
	under 1 year	1/2 years	2/5 years	5/15 years	15/25 years	25/45 years	45/55 years	55/65 years	65 and over			
Diphtheria	1	1	1	1	1	1	1	1	1	1	11	187
Other epidemic diseases	1	1	1	1	1	1	1	1	1	1	11	11
Tuberculosis, respiratory system	6	7	7	7	7	7	7	7	7	7	71	61
Tuberculosis, nervous system	7	7	7	7	7	7	7	7	7	7	71	71
Cancer, Malignant tumours	31	31	31	31	31	31	31	31	31	31	311	311
Meningitis	1	1	1	1	1	1	1	1	1	1	11	11
Haemorrhage, apoplexy & softening of the brain	14	14	14	14	14	14	14	14	14	14	141	141
Heart diseases	29	29	29	29	29	29	29	29	29	29	291	291
Acute bronchitis	5	5	5	5	5	5	5	5	5	5	51	51
Chronic bronchitis	4	4	4	4	4	4	4	4	4	4	41	41
Pneumonia	15	15	15	15	15	15	15	15	15	15	151	151
Other diseases of the respiratory system	2	2	2	2	2	2	2	2	2	2	21	21
Diseases of stomach	2	2	2	2	2	2	2	2	2	2	21	21
Diarrhoea and enteritis	2	2	2	2	2	2	2	2	2	2	21	21
Appendicitis & typhlitis	2	2	2	2	2	2	2	2	2	2	21	21
Hernia, intestinal obstruction	2	2	2	2	2	2	2	2	2	2	21	21
Cirrhosis of the liver	2	2	2	2	2	2	2	2	2	2	21	21
Acute and chronic nephritis	8	8	8	8	8	8	8	8	8	8	81	81
Congenital debility and malformations	6	6	6	6	6	6	6	6	6	6	61	61
Old age	4	4	4	4	4	4	4	4	4	4	41	41
Violent deaths	2	2	2	2	2	2	2	2	2	2	21	21
Suicide	1	1	1	1	1	1	1	1	1	1	11	11
Other diseases	36	36	36	36	36	36	36	36	36	36	361	361
Totals	187	11	4	1	3	1	1	1	1	1	11	187

BIRTHS AND INFANTILE MORTALITY.

The number of registered births for the year was four hundred and twelve, two hundred and twenty-four of these were males and one hundred and eighty-eight females, giving a birth rate of 21.38 per thousand population.

There were also nine births registered from the non resident population.

Fifteen children under one year of age died during the year, giving an infantile mortality rate of 36.4 per thousand births.

CAUSES OF INFANT DEATHS.

Cause of Death	Under 1 week	1/2 weeks	2/3 weeks	Total under 4 weeks	1/3 months	3/6 months	6/9 months	9/12 months	Total under one year
Congenital debility and malformations	4	—	—	—	2	—	—	—	6
Gastro Enteritis	—	—	—	—	—	—	1	1	2
Pneumonia	—	—	—	—	1	1	2	1	5
Mediastinal Adenitis	—	—	—	—	—	—	1	—	1
Intestinal Obstruction	—	—	—	—	—	—	1	—	1
Totals ...	4	—	—	—	3	1	5	2	15

INFANT WELFARE AND SCHOOL MEDICAL SERVICES

These services were transferred to the Colonial Government in Dec. 1945. By this change efficient co-ordination of the preventive and curative aspects of Child Health is ensured.

I am indebted to the Chief Medical Officer of the Colonial Government for the following report on the work of these departments.

CHILD WELFARE SERVICE.

The work was carried out at a Centre known as "The Haven" situated in the centre of the town.

The staff was augmented in March, 1946, and consisted of a Paediatrician who is also in charge of the Children's Ward at the Colonial Hospital, two Health Visitors, two Assistant Visitors, and a clerk. Voluntary workers from the Nursing Division of St. John's Ambulance Brigade gave valuable assistance.

A new Centre was opened in July, 1946, at Cumberland Road, for the benefit of those residing in the South district.

At these centres free medical advice was given to any mother who brought her infant or young child under five years for examination. The two Health Visitors and their assistants also visited the homes whenever possible, to help and advise mothers on many problems arising in the care of young children. Milk foods were supplied free or at a reduced rate to those mothers who required assistance. Necessitous nursing mothers requiring extra nourishment and children attending the School Medical Clinic found to be suffering from malnutrition were also referred to the Social Welfare Officer for extra milk or other assistance.

The District Medical Officers provided free medical treatment to those persons unable by reason of need to obtain it for themselves. Applications for this assistance had to be made to the police, but plans for relieving the already overworked police force of this duty were suggested by the Social Welfare Committee and are under consideration.

An omnibus service was started to enable mothers and babies living in Catalan Bay Village to attend clinics once a week.

Talks were given to mothers by the Health Visitors. A special endeavour was made to overcome a reluctance of some mothers to continue breast feeding. Some mothers found it easier to put their babies on sweetened condensed milk. Very often the kind of milk was quite unsuitable and gave rise to gastrointestinal disturbances.

Number of sessions held at "The Haven" Clinic	162
Number of sessions held at South Clinic	23
Number of babies registered at "The Haven"	832
Number of babies registered at South Clinic	81
Number of attendances at "The Haven"	8218
Number of attendances at South Clinic	497
Average attendance per session at "The Haven" ...	50.7
Average attendance per session at South Clinic	21.6

Nutritional aids were issued as follows:—

Cow & Gate (Full cream, half cream and Lacidac powdered milk)	13,625 lbs.
Vitamins A & D concentrate (Adexodin Capsules, Adexolin & Radiostoleum drops)	658 oz.
Pure Cod Liver Oil	13.9 gl.
Extract of Malt & Cod Liver Oil	696 lbs.
Fersolate pills (iron pills)	19,565
Ostocalcium tablets	28,700
Gentian Violet pills (for treatment of thread worm) ..	736
Vitamin C tablets	37,179
The number of home visits made by the Health Visitors	3487
Inoculations against Diphtheria given during the year (A.P.T. being used):—	
Number of babies fully immunised	88
Number of babies injected with 1st dose	115
Number of children (5 year old) injected with boosting dose	9

SCHOOL MEDICAL SERVICE.

Owing to the re-allocation of school children to the various schools only "entrance and leavers" were medically examined throughout the year and a nutritional survey of 600 children of various ages was also carried out.

The number of children inspected was 421. Abnormal conditions revealed by medical inspections, were as follows:—

Anaemia	149
Skin conditions (Impetigo & Scabies)	18
Ringworm of Scalp	8
Dental caries	216
Enlarged cervical glands	105
Enlarged tonsils and adenoids	128
Enlarged tonsillar glands	95
Nasal obstruction (separate from above)	18
Mentally backward	7
Undescended testicles	36
Poor Posture defects	39
Chest conditions	59
Nutritional aids were issued to school children as follows:—	

	Children
Fersolate pills	78
Adexolin capsules	12
Ostocalcium tablets	132
Cod Liver Oil	45
Extract of Malt & Cod Liver Oil	53

School Clinics.

There were 42 sessions held throughout the year, and there were 673 attendances for treatment. 712 children had their eyes tested by the Health Visitors. 199 were referred to the Ophthalmic Surgeon at the Colonial Hospital for further investigation.

Cleanliness inspections were carried out in the schools with the following results. Out of 1690 children examined 1361 were found to be clean. 329 were found to have dirty heads and 3 cases were so bad as to need exclusion from school.

Home visits to school children were also carried out by the Health Visitors. 70 children were visited.

School children requiring dental treatment were referred to the Dental Surgeons (Mr. Danino and Mr. Cochrane). They attended at the Private Surgeries by appointment—Mr. Danino on Wednesdays and Fridays at 9.30 a.m.—Mr. Cochrane on Tuesdays and Thursdays at 9.30 a.m.

SUMMARY OF DENTAL TREATMENT.

Dental Surgeon	No. of Sessions for treatment	Teeth Conserved	Teeth Extracted	Attendances for Scaling and Gum treatment
Mr. A. Danino	163	553	348	168
Mr. J. Cochrane	51	218	93	34

PREVALENCE AND CONTROL OF INFECTIOUS DISEASES.

One hundred and three cases of infectious diseases were notified in 1946 (102 in 1945). Of the seven deaths from infectious disease, six were due to Pulmonary Tuberculosis and one to Diphtheria.

There were no epidemic outbreaks of infectious diseases during the year.

DIPHTHERIA.

Eleven cases were notified being fairly evenly distributed throughout the year. There was one death from Diphtheria.

The incidence of diphtheria is low but one cannot help feeling that it could be even lower and what is more important, that death from diphtheria could be virtually eliminated if the immunization of children became universal.

ENTERIC FEVER AND DYSENTERY.

There was a slight increase in the number of cases of Enteric Fever notified, 12 compared with 11 in the previous year. This however is balanced by a decrease from eleven in 1945 to eight in 1946 in the number of cases of Dysentery.

SMALL POX.

There were no cases of Smallpox and none were brought into the Colony for treatment.

This desirable state is no doubt attributable to the high state of Vaccination throughout the Colony, as outbreaks have occurred in neighbouring countries with which the Colony is frequently in communication.

Every child is required to be vaccinated within three months of birth and to be revaccinated at 12 years of age.

During the year the Public Vaccinator carried out 72 vaccinations and 292 revaccinations and the Medical Officer in charge of the Child Welfare Centre performed 162 vaccinations.

Table showing state of Vaccination.

Number of Children born	412
Number died before vaccination	10
Number who left Gibraltar	6
Certified as insusceptible to vaccination	6
Vaccination postponed on medical grounds	27
Number successfully vaccinated	265
Objectors to vaccination	Nil.
Outstanding	98

TUBERCULOSIS.

Tuberculosis remains the greatest cause of death among the infectious diseases prevalent in the Colony, and among deaths from all causes, Tuberculosis in all its forms, is the fourth most frequent.

The K.G.V. Sanatorium is without doubt doing excellent work not only in treating early cases, thus ensuring a higher rate of recovery, but also in isolating the infectious established case and in many instances, rendering him non-infectious.

However I feel that the full benefit of this institution will not be felt until a follow up service in the home is established for the discharged case.

Another factor in the Tuberculosis problem is the general overcrowding and there is every reason to expect improved figures for the incidence of this disease when better housing conditions result from the building of new houses and flats.

RABIES.

The importation of dogs except from the U.K. has been prohibited and all dogs are required to be licensed, and to be muzzled. Stray dogs found at large are impounded and if not claimed within seven days are destroyed.

Every dog which has bitten a person is kept under observation at the Kennels for a period of eleven days, after which if no signs of disease have been observed it is returned to its owner. This rule is very strictly observed.

During 1946, one dog which had bitten its owner and his two daughters, was impounded and died with symptoms of Rabies. Specimens from the animal were sent to the Pasteur Institute, Tangier, where the diagnosis was confirmed.

All three persons who had suffered bites were immediately sent to the Institute where they received anti-Rabic treatment.

A round up of all dogs in the vicinity resulted in eighteen dogs being taken to the Kennels for observation, fifteen of these were destroyed with the consent of the owners and three were quarantined for six months.

During the year the following dogs were admitted to isolation at the Kennels.

Stray dogs	93	25 claimed by owners
		68 destroyed.
Dogs detained after		25 claimed by owners
biting persons.....	32	7 destroyed.
Dogs detained as		3 quarantined and returned
contacts of rabies ...	18	to owners
		15 destroyed.

Quarterly Return of Notifications of Infectious Diseases—Civil Population 1946.

	January	February	March	1st Qr.	April	May	June	2nd Qr.	July	August	Sept.	3rd Qr.	October	November	December	4th Qr.	Total	Deaths
Pulmonary Tuberculosis	2	4	2	8	2	4	—	6	—	6	5	11	2	3	—	5	30	6
Rubella	2	—	—	2	1	—	—	1	1	—	—	1	—	—	—	—	4	—
Diphtheria	—	2	—	2	2	1	1	4	1	—	—	1	—	4	—	4	11	1
Chicken Pox	—	1	—	1	—	4	8	12	11	3	1	15	1	—	—	1	29	—
Dysentery	—	—	1	1	—	—	—	—	1	4	2	5	2	—	—	2	8	—
Enteric Fever	—	—	1	1	—	—	1	1	—	2	2	4	3	—	3	6	12	—
Measles	—	—	—	—	—	1	—	1	1	—	—	1	—	1	—	1	3	—
Scarlet Fever	—	—	—	—	—	—	1	1	—	—	—	—	—	3	—	3	4	—
Typhus	—	—	—	—	—	—	—	—	—	—	1	1	—	1	—	1	2	—
	4	7	4	15	5	10	11	26	15	15	9	39	8	12	3	23	103	7

Cases landed from the bay or cases brought into the town for treatment

	January	February	March	1st Qr.	April	May	June	2nd Qr.	July	August	Sept.	3rd Qr.	October	November	December	4th Qr.	Total	Deaths
Pulmonary Tuberculosis	1	—	1	2	3	—	2	5	—	4	2	6	—	—	—	—	13	—
Dysentery	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	1	—
Chicken Pox	—	—	1	1	—	—	3	3	—	—	—	—	1	—	—	1	4	—
Enteric Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	1	—	2	3	3	—	5	8	—	5	2	7	1	—	—	1	19	—

Age and Sex incidence of Notifiable Infectious Diseases—Civil Population 1946.

(15)

Notifiable Disease	NUMBER OF CASES														Districts			No. of cases removed to Hospital	
	All Ages	Under 1 year		1 and under 5 years		5 and under 15 years		15 and under 25 years		25 and under 45 years		45 and under 65 years		65 and over		North	Central		South
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.				
Pulmonary Tuberculosis	30	—	—	—	—	—	—	—	4	7	10	4	3	1	—	1	—	6	21
Rubella	4	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
Diphtheria	11	—	1	2	3	3	3	—	—	—	—	—	—	—	—	—	—	3	6
Chicken Pox	29	1	1	3	—	13	7	—	—	1	2	1	—	—	—	—	—	10	3
Dysentery	8	—	—	—	—	2	1	—	—	—	4	—	—	—	—	—	—	4	8
Enteric Fever	12	—	—	—	—	3	2	—	—	1	4	1	1	—	—	—	—	7	10
Measles	3	—	—	1	—	1	2	—	—	—	—	—	—	—	—	—	—	5	—
Scarlet Fever	4	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
Typhus Fever	2	—	—	—	—	—	3	—	—	—	—	—	1	—	—	—	—	2	1
Totals	103	2	5	6	5	22	16	4	9	20	6	5	2	1	—	1	—	22	49

Monthly Incidence of Infectious Diseases—Showing Number of Cases and Deaths

C = cases

D = deaths

Months.	Pulmonary Tuberculosis		Rubella		Diphtheria		Chicken Pox		Dysentery		Enteric Fever		Measles		Scarlet Fever		Typhus Fever	
	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
January	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
February	4	—	2	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—
March	2	1	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—
April	2	2	1	1	2	1	—	—	—	—	—	—	—	—	—	—	—	—
May	4	—	—	—	1	—	4	—	—	—	—	—	1	—	—	—	—	—
June	—	1	—	—	1	—	8	—	—	—	1	—	1	—	1	—	—	—
July	—	—	1	—	1	—	11	—	1	—	—	—	—	—	—	—	—	—
August	6	—	—	—	—	—	3	—	4	—	2	—	—	—	—	—	—	—
September	5	1	—	—	—	—	1	—	—	—	2	—	—	—	—	—	1	—
October	2	1	—	—	—	—	1	—	2	—	3	—	1	—	—	—	—	—
November	3	—	—	—	4	—	—	—	—	—	3	—	—	—	3	—	—	—
December	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals ...	30	6	4	—	11	1	29	—	8	—	12	—	3	—	4	—	2	—

During October and November a campaign to rid Gibraltar of some of its stray cats was instituted. Two men were employed and every effort was made to avoid the destruction of domestic pets. So well did the public co-operate that of the 157 cats caught not one was claimed in the 48 hrs. which each was kept before being destroyed.

INVESTIGATION AND PREVENTION OF OTHER DISEASES.

MOSQUITO CONTROL:

During the year the following species were identified:—

<i>Aedes argenteus</i>	5
<i>Theobaldia longiareolata</i>	7
<i>Culex pipiens</i>	13

The appearance of *Aedes argenteus* in January and its persistence in late October was most unusual, the prevalence in the past being always from July to September.

During the year under review no additional staff was employed during the breeding season, the work being carried out by the Sanitary Inspectors and their assistants, in the course of their normal duties.

Complaints of mosquito infestation were few and were dealt with immediately. As is usual breeding places were in most cases found in close proximity to the place where the complaint arose.

The department was pleased to be able to assist the Head Gardener at Alameda Gardens, in combating an infestation of the trees with Processionary Moth, a D.D.T. spray being found to be exceptionally effective.

The following table gives details of the work done in the anti-mosquito campaign:—

Visits paid to premises	29696
Breeding places found	95
In wooden tubs	30
In wooden barrels	3
In earthenware vessels	1
Miscellaneous	61

MOSQUITO CAMPAIGN RETURN—YEAR 1945

T = tubs. B = barrels. E/V = earthenware vessels. O = others.

Week ending	Visits paid to premises	Town Lower			Town Middle			Town Upper			South			North			Totals	
		T.	B.	E/V.	O.	T.	B.	E/V.	O.	T.	B.	E/V.	O.	T.	B.	E/V.		C.
Jan.	501	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	517	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	570	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	547	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	555	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	563	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	551	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	566	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	580	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	584	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	569	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	567	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	586	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	579	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	570	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	481	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	572	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	566	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	552	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	574	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	585	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	536	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	583	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	505	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	576	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	578	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	566	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	568	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	575	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	551	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	551	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	550	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	550	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	577	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	566	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	565	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	567	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	584	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	568	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	580	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	550	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	594	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	560	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	592	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	598	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	595	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	515	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	586	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	590	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	619	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	599	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	577	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	200	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals ...	29,696	...	...	...	3	...	...	...	1	27	...	...	...	...	...	...	15	95

“Others” include pits, drinking troughs, washing troughs, catch pits, wells, gullies, fresh water tanks, fire buckets, galvanised iron baths, old tins, flower pots, vases, bottles, grindstone receptacles, flushing tanks, underground tanks, wash boilers, &c.

SUMMARY

Tubs	30	1st Offences	73
Barrels	3	2nd Offences	4
Earthenware receptacles	1	3rd Offences	1
Others	61	4th Offences	1
Grand Total	95		

FLIES :

The prevalence of flies has remained low, no doubt due to the daily collection of refuse and the virtual disappearance of the horse from the streets of Gibraltar.

RAT EXTERMINATION CAMPAIGN

The campaign started in mid 1945, but did not get fully under way until the beginning of 1946, the later months of 1945 being employed in training of personnel and making surveys of Rat infestations.

Previous to the start of the campaign the Rat population in Gibraltar had been attacked by the old methods of trapping and direct poisoning. In the Dockyard about 200 Rats per month had been trapped, and about 60 per month in the Town. These efforts were supplemented from time to time, by organized rat weeks. The military authorities had similarly carried out trapping and poisoning on W.D. properties and taken part in a number of successful Rat-weeks. These efforts were, however, handicapped by lack of knowledge of modern methods, by the difficulty in obtaining traps and by the use of inefficient poisons like Barium Carbonate. As a result the rat population was increasing and was reaching an alarming size. Disquiet on this account was much increased by an outbreak of Bubonic Plague in Malta and neighbouring ports.

Consequently the suggestion of The Colonial Office that Mr. McCauley Gracie, The Director of Infestation Control in The Ministry of Food, should visit the Colony whilst he was in the Mediterranean was warmly welcomed. His visit took place in July 1945 when he held conversations with H.E. The Governor, The Colonial Secretary, The Colonial and Service Medical authorities in the Colony, he also discussed with The Attorney General legislation necessary for the proposed campaign, a discussion which led to the passing of the Rats and Mice Destruction Ordinance in January 1946.

On the suggestion of Mr. McCauley Gracie, a party of seven went to Malta in August to learn the latest methods of rat extermination. During the five days when they were on the Island they saw these methods in action. The party was a mixed one, consisting of Civil, Military, Naval and R.A.F. personnel, the Civil authority being represented by The Acting M.O.H.; The City Engineer, and the Chief Sanitary Inspector.

To co-ordinate the campaign The Board of Health appointed a committee consisting of The Chief Assistant Secretary to the Colonial Secretary, as chairman: the D.A.D.H.—M.O.H.: the City Engineer, the Captain of the Port, and a representative from each of the three services.

In mid-September Mr. S. A. Barnett, Scientific Adviser on the Directorate of Infestation Control, arrived in Gibraltar from Malta and made an extensive survey of the Rat problem in the Colony. He reported that the dominant rat was the *Rattus rattus*, the so-called ship or black rat; *Rattus Norvegicus* the common brown rat, was also present but in fewer numbers. The main sites of infestation were Waterport, the Markets, and Irish Town, also the Dockyard and one or two other individual premises scattered about the town. Mr. Barnett suggested the organization and the technique which should be used.

Following Mr. Barnett's report, a time-table was drawn up for the treatment of the whole area of the Rock. Unfortunately, it was found impossible to keep exactly to this time-table, owing to the non-arrival of baits and poisons.

The scheme included all the Service premises, as well as Civil, and excellent co-ordination was achieved between the various departments, thanks to the co-ordinating committee.

The last weeks of 1945 were employed, first, in training personnel and then in making surveys of the rat population by laying test baits, the real attack commenced in January 1946. The whole of the Rock was divided up into areas or blocks, each block being treated as a whole, the treatment of individual premises being considered unsatisfactory. The blocks were taken in rotation starting in the Waterport area and sweeping round in a clock wise direction whilst at the same time working southwards through the town and docks. Thus a constant front was maintained against the rat population, which prevented them from infiltrating through the attacking lines. Each treatment or "strike" consisted of five days pre-baiting followed by poison baiting, and each block was given at least two treatments using different baits and different poisons.

By July 1947 practically the whole of the Rock had received at least two "strikes," some of the more heavily infested areas however, required three or even four "strikes" to clear them. In view of the completion of the initial campaign the staff, both

Civil and Service, was considerably reduced, only sufficient men being retained to carry out the maintenance service. Tables are appended showing the number of men employed throughout the campaign; week by week details of work done by the Civilian teams; a summary of work-done by Service and Civilian teams; and the quantities of bait and poisons used.

There is no doubt that the anti rat campaign has been a success and has eliminated all the major rodent infestations, but if the low rate of infestation is to be maintained it is important that the combined efforts of the service and civilian authorities be continued, as, not only do rats breed with extraordinary rapidity, but there is continued danger of the importation of rodents at the various docks. The efforts of the authorities would be greatly assisted if all the inhabitants of the Rock took care to protect food-stuffs from their ravages, remembering that rats can find much of their food amongst refuse which should therefore be always kept in metal bins with close fitting lids. The removal of scrap and other junk does much to hinder the rat population from finding suitable nesting sites and ought to be pursued with vigour.



RAT CAMPAIGN.

T A B L E

CIVILIAN—YEAR 1946.

(22)

Week Ending	Campaign Week No.	Premises treated	Total No. of Bait points laid	No. of poison baits laid	TAKES RECORDED				CARCASSES FOUND					
					(2 oz poison baits.)				R.R.	R.N.	M.M.			
					1	3/4	1/2	1/4						
Jan. 12	16	58	485	485	6	5	22	126	8	43	5			
Jan. 19	17	103	1003	600	2	9	48	206	27	—	12			
Jan. 26	18	144	1198	604	8	5	52	270	61	6	19			
Feb. 2	19	115	1137	443	2	4	13	169	11	2	4			
Feb. 9	20	122	1076	372	—	1	8	163	7	2	9			
Feb. 16	21	102	709	250	—	1	6	76	—	—	4			
Feb. 23	22	125	782	238	—	1	1	109	—	—	10			
Mar. 2	23	168	801	322	—	—	7	174	2	1	15			
Mar. 9	24	160	1358	529	20	14	35	226	26	7	3			
Mar. 16	25	117	1371	490	—	15	28	223	8	—	13			
Mar. 23	26	84	608	191	—	2	9	89	—	—	5			
Mar. 30	27	135	902	409	8	4	11	138	1	5	11			
April 6	28	107	1179	517	1	9	44	181	8	7	8			
April 13	29	108	1017	421	—	—	9	232	13	—	5			
April 20	30				ASTER	—	WEEK							
	31	50	511	336	—	3	9	67	20	1	1			
May 5	32	51	515	237	1	—	3	92	5	1	5			
May 11	33	104	873	385	3	4	12	163	6	—	15			
May 18	34	60	473	253	—	2	6	101	7	—	8			
May 25	35	63	710	247	4	—	12	78	2	—	11			
June 1	36	84	1206	631	2	2	30	200	1	—	4			
June 8	37	70	1435	761	5	1	14	260	1	—	6			
June 15	38	89	1086	573	—	—	16	202	5	—	4			
June 22	39	95	1081	662	2	—	11	212	4	—	5			
June 29	40	29	566	109	—	—	1	56	12	—	4			
July 6	41	47	787	197	1	—	1	71	2	—	—			
July 13	42	37	338	81	1	1	—	17	3	—	—			
July 20	43	20	265	125	—	—	—	28	—	—	5			
July 27	44	10	97	52	2	—	—	31	1	—	—			
Aug. 3	45	8	277	163	1	1	1	46	—	—	3			
Aug. 10	46	8	46	32	—	—	1	19	5	—	1			
Aug. 17	47	10	190	134	—	2	1	58	—	—	2			
Aug. 24	48	5	68	20	—	—	5	15	—	—	—			
Aug. 31	49	11	117	89	—	—	2	75	—	—	6			
Sep. 7	50	8	60	40	—	—	—	134	26	—	—			
Sep. 14	51	8	351	303	2	4	27	19	—	—	—			
Sep. 21	52	7	76	60	—	—	—	36	2	—	—			
Sep. 28	53	12	111	22	—	—	—	5	—	—	—			
Sep. 28	54	31	211	84	—	—	—	55	1	—	1			
Oct. 5	55	26	234	128	—	3	1	51	—	—	5			
Oct. 12	56	42	428	176	—	1	4	89	—	—	3			
Oct. 19	57	35	230	178	—	1	5	89	—	—	2			
Oct. 26	58	36	225	145	—	—	—	78	4	—	11			
Nov. 2	59	78	516	253	—	—	4	131	—	8	5			
Nov. 9	60	52	350	155	—	—	3	79	—	—	8			
Nov. 16	61	—	324	105	—	—	2	42	—	—	—			
Nov. 23	62	—	200	80	—	—	3	51	—	—	—			
Nov. 30	63	26	141	51	—	—	—	22	—	—	—			
Dec. 7	64	13	213	109	—	—	4	70	—	—	5			
Dec. 14	65	17	73	62	—	—	1	38	—	—	—			
Dec. 21	66	9			CH	R	I	S	T	M	A			
Dec. 28					8			W	E					
TOTALS:-					2899	28010	12909	71	95	472	5172	281	90	248

Note: R.R.=Rattus Rattus

R.N.=Rattus Norvegicus

M.M.=Mus. Musculus

RAT CAMPAIGN.

A/C 980/OM/2357

T A B L E

NUMBER OF MEN EMPLOYED BY CITY COUNCIL.

FROM 1/10/45 to 31/12/46.

DATES		Rodent Officer	Charge- Hand	Handy- Man	Skilled Labourer	Labourer	Total No. of Men Employed
From	To						
1.10.45	25.11.45	—	1	—	—	—	1
26.11.45	5.12.45	—	1	—	—	1	2
6.12.45	10.12.45	—	1	—	7	1	9
11.12.45	31.12.45	—	1	—	8	1	10
1.1.46	6.1.46	—	1	—	7	1	9
7.1.46	9.1.46	—	1	—	7	6	14
10.1.46	23.1.46	—	1	1	7	7	16
24.1.46	30.3.46	1	—	1	7	7	16
31.3.46	28.4.46	1	—	1	7	6	15
29.4.46	22.6.46	1	—	1	7		16
23.6.46	26.6.46	1	—	1	7	4	13
27.6.46	17.7.46	1	—	1	5	4	11
18.7.46	24.7.46	1	—	1	2	2	6
25.7.46	9.9.46	1	—	1	3	—	5
10.9.46	31.12.46	1	—	1	6	1	

RAT CAMPAIGN.

T A B L E

SUMMARY OF WORK DONE FROM CAMPAIGN WEEK

Nos. 1 to 65. 24/9/45 to 21/12/46

Teams performing Work.	No. of Pre-bait points laid.	No. of baits discontinued	Poison baits laid	Takes Recorded
Combined Military, Dockyard & Civilian	2,945	—	2,945	711
Military	18,496	9,611	8,885	1,190
H.M. Dockyard ...	11,763	5,108	6,655	1,973
R.A.F.	1,988	614	1,374	378
Civilian	28,010	15,101	12,909	5,810
Total ...	63,202	30,434	32,768	10,062

RAT CAMPAIGN.

T A B L E

WORK DONE FROM CAMPAIGN WEEK No. 1 to 15.

24/9/45 to 4/1/46

Campaign week No.	Week Ending	COMBINED MILITARY DOCKYARD & CIVILIAN				R. A. F.			
		Pre-bait points laid	No of Baits discontinued	Poison Baits laid	Takes Recorded	Pre-bait points laid	No. of Baits discontinued	Poison Baits Laid	Takes Recorded
4	20.10.45	104	Nil	104	38	—	—	—	—
5	27.10.45	317	„	317	78	—	—	—	—
6	3.11.45	264	„	264	76	—	—	—	—
7	10.11.45	—	—	—	—	—	—	—	—
8	17.11.45	52	Nil	52	—	—	—	—	—
9	24.11.45	108	„	108	8	—	—	—	—
10	1.12.45	90	„	90	8	—	—	—	—
11	8.12.45	1226	„	1226	228	147	—	147	27
12	15.12.45	194	„	194	64	65	—	65	31
13	22.12.45	87	„	87	37	100	—	100	60
14	29.12.45	—	—	Xmas Week		—	—	—	—
15	4. 1.46	503	„	503	174	160	—	160	100
Totals:-		2945	Nil	2945	711	372	Nil	372	218

RAT CAMPAIGN.

T A B L E

RECORD OF MATERIAL RECEIVED AND USED
FROM 1st OCTOBER 1945 to 31st DECEMBER 1946.

	Wheat	P O I S O N							
		Zinc Phosphide		Arsenious Oxide		Antu		Barium Carbonate	
		lbs.	ozs.	lbs.	ozs.	lbs.	ozs.	lbs.	ozs.
Quantity Received	9617	468	—	538	—	1	—	1	—
Amounts used	5521	97	9	352	6	—	6	—	—
Stock on 31.12.46.	4096	370	7	185	10	—	—	1	—

CONDEMNED ARMY BISCUITS, STOCK ON 31.12.16. —
59,000 lbs.

MEDICAL WORK DONE FOR THE COUNCIL

The following numbers of men have been examined prior to their employment by the Council :—

January	48
February	33
March	42
April	31
May	74
June	32
July	43
August	55
September	32
October	26
November	3
December	8
Total	<u>427</u>

DISINFECTION

Month	Beds and Mattresses	Bolsters and Pillows	Blankets and Quilts	Sheets	Sundries	Totals
January	—	—	—	—	—	—
February	2	4	6	2	8	22
March	2	2	3	—	21	28
April	2	2	4	2	—	10
May	9	7	6	9	11	42
June	2	1	1	—	1	5
July	9	10	—	—	3	22
August	22	14	15	5	8	64
September	156	97	63	2	8	326
October	4	—	—	—	—	4
November	104	47	3	2	1	157
December	53	57	4	4	5	123
Totals	365	241	105	26	66	803

AMBULANCE SERVICES.

The number of cases conveyed by City Council Ambulances during the year was as follows:—

	Local Cases	Bay Cases
Pneumonia	1	4
Diphtheria	1	—
Enteric Fever	1	—
Appendicitis	4	17
Malaria	—	4
Dysentery	—	3
Injuries	75	38
Typhoid Fever	3	5
Influenza	—	1
Small Pox	—	2
Venereal Disease	—	9
Maternity Cases	22	1
Heart Disease	1	2
Tuberculosis	7	6
Coronary Thrombosis	—	2
Mental Cases	16	1
Bright's Disease	2	—
Aortic Disease	—	1
Miliary Disease	1	1
Hanatomy Scrotum	—	1
Duodenal Ulcer	—	1
Pyrexia	—	1
Diabetes	1	—
Paralysis	3	—
Erysipelas	1	—
Dead Bodies	195	3
Miscellaneous	52	69
Totals	<u>386</u>	<u>172</u>

SANITARY CIRCUMSTANCES OF THE DISTRICT.

I am indebted to the City Engineer, Mr. F. L. Ruggeri, M.Inst., M. & Cy, E., M.I. Struct, E., for assistance in the preparation of this section of the Report.

Water Supply

(a) Potable Water.

No changes in storage arrangements have been made during the year. The total reservoir storage at the end of 1946 was 13,848,742 gallons.

The amount of water collected from the catchments into the reservoirs was 15,311,248 gallons (13,301,453 gallons in 1945). In addition 22,818,853 gallons were pumped from North Front Wells. The following quantities were issued:—

From the Reservoirs:—

To shipping (Waterport)	14,732,984
To shipping (Admiralty North Mole).....	1,812,500
To the Town	33,543,452

Total supply	49,088,936
--------------------	------------

Directly from wells:—

To North Front Camps	1,611,589
To City Council	209,700
To private consumers	114,252

Total	1,935,541
-------------	-----------

(b) Brackish Water.

The amount of brackish water pumped from the wells at North Front was 369,657,800 gallons (367,958,100 gallons in 1945). It is supplied for general purposes other than potable.

Sewage Disposal and Drainage.

The whole of the sewage of Gibraltar discharges into the sea at Europa Point. The main sewer is flat in gradient and collects silt in small quantities at high tides. It is $2\frac{1}{2}$ miles long and carries both storm water and sewage. A low-lying area in the northern part of the Colony is drained to various ejectors operated by compressed air, which lift the sewage to the head of the main outfall sewer. Works on the Upper Rock have resulted in more flood water reaching the town sewers than hitherto.

The total quantity of sewage and storm water pumped from low level during the year (exclusive of gravitation system) was 127,939,680 gallons.

Refuse Collection.

An average of 25 tons of house refuse was collected daily and is still being disposed of by tipping into the sea through the chute at Europa Point, the City Council's destructor having been demolished for military reasons during the late war.

Work was commenced on a new modern destructor during the year, and it is hoped that this will be completed during 1947.

Public Highways.

The public highways have been well maintained in spite of the circumstances arising out of the war. A big programme for road improvements is contemplated but cannot be commenced until machinery and materials become available.

Public Baths.

The fresh water baths in the John Mackintosh Square have been maintained. The sea bathing establishments have been well patronised.

The average daily attendance during the summer being 600.

HOUSING.

Many dwellings in Gibraltar are badly overcrowded, the overcrowding in some being so extreme as to constitute a definite danger to health. A survey in 1938 showed how severe this problem was before the war. It can be no better now as the population has continued to increase.

A policy of providing temporary houses and of converting into flats the few large houses suitable for such conversion, has been pursued energetically, in an effort to ameliorate this overcrowding and to permit the early return of evacuees still abroad.

During the year seventy-four concrete houses were completed and newly erected Nissen Huts provided a further 177 dwellings. Also many of the bombed properties have been repaired and made habitable. Up to the end of 1946 approximately 2,500 persons had been accommodated in temporary houses, housing centres and converted buildings.

Some progress has also been made on the permanent housing scheme, 18 houses at Shorthorn Farm and six houses at Mount Road being in an advanced stage of construction.

Detailed plans and specifications have been drawn up for a large permanent housing scheme and a contract has been entered into for the erection of 472 flats. Work on the site for these flats commenced in December.

During the year the Town Planning Committee under the guidance of Mr. C. Holliday the Town Planning Consultant made considerable head-way in the preparation of a Town Plan for Gibraltar. Mr. Holliday's report should be completed early in 1947. The geographical features of the Rock make planning a very difficult matter but this very lack of space makes the enforcement of a considered plan the more necessary, otherwise the haphazard building of houses, shops, business premises, and factories will endanger the health and amenities of the city.

SUMMARY OF WORK DONE BY SANITARY INSPECTORS DURING 1946.

Complaints Received :	
Written	14
Verbal	1170
Premises inspected:	
General inspection.....	2
Statutory notices served	2
Informal notices served	406
Nuisances found :	
Defective drains	302
Obstructed drains	545
Defective W.C.s.....	234
Defective W.C.s fittings	373
water fittings	233
rainwater pipes	57
eavegutters	88
roofs	92
yard paving	8
Dampness	45
Dirty premises	260
Defective or no dustbin	66
Other minor defects	1093
Suspected pollution of water in underground tanks	29
Underground tank not insect proof	1
Brackish water running to waste	107
Brackish water tank not insect proof	8
Miscellaneous Services :	
Samples of food and drugs taken for analysis	38
Premises disinfected for infectious disease	15
Premises disinfected for vermin, &c.	148
Articles disinfected at North Front disinfecting Station	803
Visits of enquiry re infectious disease	65
Cases removed in Ambulances :	
Local	386
Bay	172

Visits to milk shops.....	75
Visits to Eating Houses	812
Visits to Mineral Water Factories	149
Visits to Common Lodging Houses	84
Visits to premises on which notice for abatement of nuisance has been served and are revisited for the purpose of ascertaining if requirements are being complied with	1744
Vaccination notices served	842
Legal proceedings instituted	1
Foodstuffs, &c., condemned as unsound	5 Tons
Street Water fittings found defective	105
Persons deloused	209
Buses disinfected	15

FOOD IN RELATION TO HEALTH AND DISEASE.

Routine supervision of milk-shops, eating houses and mineral water factories was carried out by the Sanitary Inspectors who also undertook the collecting of samples of food for analysis.

All fresh fruit and vegetables imported daily from Spain, whether for sale by market stall holders or by street vendors passes through the Public Markets where it is inspected by the market staff before being exposed for sale.

Fresh fish has been imported from Spain at an average daily rate of 5,500 pounds. This was inspected by the Market Inspectors—first at Waterport where permission to land the following fish was refused on the grounds of its being unfit for human consumption.—

	<i>Approx. weight</i>
13 cases of Whiting	780 lbs.
13 cases of Mackerel	650 lbs.
10 cases of Red Gurnet	600 lbs.

A further inspection is carried out in the Fish Market by the Inspector on duty there.

Small consignments of frozen offal have been, imported during 1946, being composed of :—

Ox. Livers.	Ox. Kidneys	Ox. Tongues	Ox. Tails
102,918 lbs.	36,168 lbs.	23,932 lbs.	39,589 lbs.
Ox. Hearts	Ox. Tripe	Ox. Brains	Sheep Hearts
13,977 lbs.	28,968 lbs.	2,267 lbs.	2,773 lbs.

The Slaughter House has remained closed during the war period, and did not operate in 1946, all the meat sold in the market being frozen.

Small quantities of fresh milk were imported from Spain, the average daily amount being 100 pints. Inspection of this milk was carried out by the Public Health Department.

REPORT ON WORK OF PUBLIC HEALTH LABORATORIES

By

Major A. L. M. CHRISTIE, R.A.M.C.
CITY ANALYST AND BACTERIOLOGIST, GIBRALTAR

The work carried out in the Laboratories shows a steady increase although as in past years, the amount of analytical work done has declined. The Medical and Public Health sides of the work have taken on an increasing importance and by keeping in close contact with the Ministry of Health in England and the Public Health Laboratories Service, new methods and developments in Pathological work have been utilized whenever possible. By maintaining this contact the Laboratory is kept up-to-date. A slight difficulty here is there is sometimes a long delay before necessary supplies can arrive from England. Good use has been made of the Laboratory facilities by the General Practitioners of Gibraltar.

The number of investigations undertaken in 1946 was 16,225, the highest to date. Specimens were received from:—

- (1) Navy, including Dockyard.
- (2) R.A.F. North Front and New Camp.
- (3) Military Hospital and M.I. Rooms.
- (4) Child Welfare.
- (5) King George V. Hospital.
- (6) Colonial Hospital.
- (7) General Practitioners.
- (8) Public Health Department.

The Blood Bank has been maintained but, as in the past the majority of the donors were military personnel. Since the greater part of the blood issued has gone to Civilian needs it is felt that the citizens of Gibraltar are not doing their fair share in enrolling on the panel of Blood Donors. Unless more civilians do enrol there is a danger of the Blood Bank Service breaking down. The need for blood donors is just as great now as it was during the war years.

The setting up of a small Laboratory in the Colonial Hospital to deal with the routine and minor work there, has not been possible as yet, but it is hoped that this will be done in the near future. This arrangement would ease considerably the difficulties inherent in the present system.

A. L. M. CHRISTIE, M.Sc. (N.Z.), Ph.D., M.B., B.S.
Major, R.A.M.C.
City Analyst and Bacteriologist
Gibraltar.

BACTERIOLOGICAL, PATHOLOGICAL AND PUBLIC HEALTH WORK.

Variety and number of specimens which come under this heading are listed below:—

Blood.

Wassermann reaction	2,910
Kahn reaction	2,910
Widal reaction	73
Smears for Malaria	16
Cultures for Enteric, Streptococci, &c.	20
Blood Count	308
Sugar estimations, sugar tolerance tests	369
Urea estimation, urea concentration factor	63
Van den Bergh, Coagulation test. B.S.R. &c,	58
Blood Grouping	180
Gonococcal Complement Fixation Test	113
Icterus index, calcium estimation &c.	11

Cerebro Spinal Fluid.

Cytology, Lang's test, Wasserman &c.	80
---	----

Swabs.

For K.L.B., Vincent's organisms, Haemolytic streptococci &c.	824
--	-----

Sputa.

Tubercle bacilli or causative organisms &c.	729
--	-----

Urines.

Analytical and bacteriological examination	1,265
--	-------

Pleural Fluids.

Cytology, organisms &c.	4
------------------------------	---

Gastric Contents.

T.B. Culture &c.....	166
----------------------	-----

Pus.

Gonococci, T.B. or causative organisms	977
--	-----

Serum.

From V.S. for Tr. Pallida (dark ground)	179
---	-----

Faeces.

Bacteriological for enteric, dysentery, occult blood.....	448
---	-----

Rats.

Examination for plague	2
<i>Histological</i> sections	47

Guineapig.

Innoculations, virulence of K.L.B. and T.B.	18
--	----

Total 11,770

*Water.**Examinations for B. Coli*

Specimens from Reservoirs	223
Specimens from Underground tanks	485
Specimens from North Front	106

Examinations for Saline content

Specimens from Waterworks	229
Specimens from North Front Wells	2,693

Total 3,736

MISCELLANEOUS.

<i>Penicillin.</i>	
Dilution and making cream	647
<i>Goats' milk.</i>	
Chemical analysis	4
<i>Mineral water, Ice cream, Ices</i>	
Bacteriological Examinations	33
<i>Breast Milk.</i>	
For Fat	6
<i>Fish for examination</i>	1
<i>Flour for analysis</i>	5
<i>Gin.</i>	
Determination alcohol strength	2
<i>Soup.</i>	
Determination of Fat	3
<i>Calculus.</i>	
Analysis	2
<i>Margarine.</i>	
Detection of rancidity	38
<i>Beer.</i>	
Determination alcohol strength	2
<i>Ether.</i>	
Examination for purity	2
<i>Granulated Sugar.</i>	
For purity	1
<i>Hair.</i>	
Detect presence of ringworm	16
Total	762

429 gallons of Distilled water sold to the Public.

58 pints of blood collected from Blood donors.

Distribution of Specimens.

I.—Navy, including H.M. Dockyard	1,835
II.—R.A.F. North and New Camp	429
III.—Military Hospital and M.I. Rooms in the Town ...	3,220
IV.—Child Welfare	84
V.—King George V. Hospital	790
VI.—Colonial Hospital	3,813
VII.—Civil and Public Work	6,054
Total	16,225

